

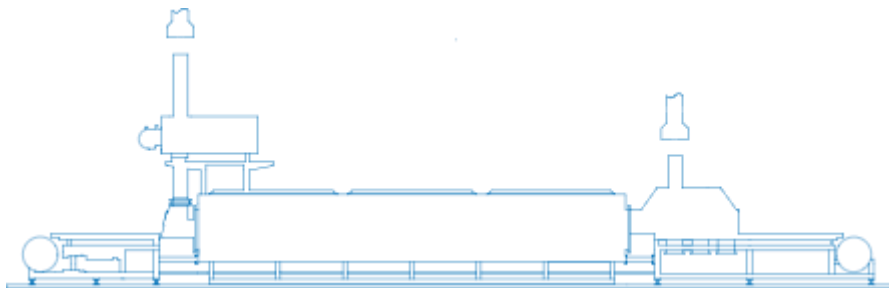
Continuous Steam Treatment Furnace

The continuous steam treatment process serves the enhancement of part-specific properties, e.g. firmness, abrasion- and corrosion-resistance. Various powder metallurgically manufactured components undergo treatment according to this procedure. Under this method, a thin layer of magnetite (Fe_3O_4) is formed. Depending on the treatment duration, it penetrates deeply into the pores of the sintered part and makes it gas-tight. Up to the present, for this purpose bell furnaces have been applied and have been providing satisfactory product qualities. Due to their cyclical operation, these furnaces can hardly meet increasing quality requirements. Complex electronic programmers are indispensable to approximate present needs.

Development and Results:

Therefore, in January 1989 our company started to develop a continuous steam treatment furnace: Our **“Conti”**. Six months went by until completion of the first prototype. At the same time, theoretical considerations proved to be unrealistic. Therefore, the furnace had to be modified several times. These activities and studies finally led to a concept meeting the following demands:

- Layer thickness 3 – 6 μm (even more under reduction of the throughput volume)
- Parts are gas tight (tested up to 10 bar at approx. 5 – 6 h process time)
- Quality homogeneity across the complete belt width
- Reproducibility of desired qualities
- No nitrogen application for purging or deoiling
- Economic handling, especially under application of automatic circulation
- Environmentally-friendly process under application of post-combustion
 - No odours
 - No oily condensates



Specifications

Technical Features	
Effective width:	300 mm, 400 mm, 600 mm
Throughput:	50 - 300 kg/h
Heating:	Electric or gas
Atmosphere:	H ₂ O steam
Temperatures:	Max. 750 °C

Applications

Steam treatment of green Fe-PM-parts

Additional Equipment Modules

+ Automation (Total Process Control (TPC) System)	
---	--

Foto Gallery



Contact:

CREMER Thermoprozessanlagen GmbH

Auf dem Flabig
D-52355 Düren
Germany

Tel.: +49 – 2421 – 968 30 0
Fax.: +49 – 2421 – 6 37 35

info@cremer-ofenbau.de
www.cremer-ofenbau.de